

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/189,028

DATE: 08/25/1999
TIME: 16:39:31

INPUT SET: S33065.raw

This Raw Listing contains the General
Information Section and up to the first 5 pages.

#4

ENTERED

SEQUENCE LISTING

1
2
3 (1) General Information:
4
5 (i) APPLICANT: Rasmussen, Grethe
6 Mikkelsen, Jan Moller
7 Schulein, Martin
8 Patkar, Shankant A.
9 Hagen, Fred
10
11 (ii) TITLE OF INVENTION: A Cellulase Preparation Comprising an
12 Endoglucanase Enzyme
13
14 (iii) NUMBER OF SEQUENCES: 33
15
16 (iv) CORRESPONDENCE ADDRESS:
17 (A) ADDRESSEE: Novo Nordisk of North America, Inc.
18 (B) STREET: 405 Lexington Avenue, 64th Floor
19 (C) CITY: New York
20 (D) STATE: New York
21 (E) COUNTRY: United States of America
22 (F) ZIP: 10174-6401
23
24 (v) COMPUTER READABLE FORM:
25 (A) MEDIUM TYPE: Floppy disk
26 (B) COMPUTER: IBM PC compatible
27 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
28 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
29
30 (vi) CURRENT APPLICATION DATA:
31 (A) APPLICATION NUMBER: 09/189,028
32 (B) FILING DATE:
33 (C) CLASSIFICATION:
34
35 (vii) PRIOR APPLICATION DATA:
36 (A) APPLICATION NUMBER: US 08/389,423
37 (B) FILING DATE: 14-FEB-1995
38
39 (viii) ATTORNEY/AGENT INFORMATION:
40 (A) NAME: Lambiris, Elias J.
41 (B) REGISTRATION NUMBER: 33,728
42 (C) REFERENCE/DOCKET NUMBER: 3469.214-US
43
44 (ix) TELECOMMUNICATION INFORMATION:
45 (A) TELEPHONE: 212-867-0123
46 (B) TELEFAX: 212-878-9655

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/189,028DATE: 08/25/1999
TIME: 16:39:31

INPUT SET: S33065.raw

47
48
49 (2) INFORMATION FOR SEQ ID NO:1:
50
51 (i) SEQUENCE CHARACTERISTICS:
52 (A) LENGTH: 1060 base pairs
53 (B) TYPE: nucleic acid
54 (C) STRANDEDNESS: single
55 (D) TOPOLOGY: linear
56
57 (ii) MOLECULE TYPE: cDNA
58
59 (iii) HYPOTHETICAL: NO
60
61 (vi) ORIGINAL SOURCE:
62 (A) ORGANISM: Humicola insolens
63 (B) STRAIN: DSM 1800
64
65 (ix) FEATURE:
66 (A) NAME/KEY: mat_peptide
67 (B) LOCATION: 73..924
68
69 (ix) FEATURE:
70 (A) NAME/KEY: sig_peptide
71 (B) LOCATION: 10..72
72
73 (ix) FEATURE:
74 (A) NAME/KEY: CDS
75 (B) LOCATION: 10..924
76
77 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
78
79 GGATCCAAG ATG CGT TCC TCC CCC CTC CTC CCG TCC GCC GTT GTG GCC 48
80 Met Arg Ser Ser Pro Leu Leu Pro Ser Ala Val Val Ala
81 -21 -20 -15 -10
82
83 GCC CTG CCG GTG TTG GCC CTT GCC GCT GAT GGC AGG TCC ACC CGC TAC 96
84 Ala Leu Pro Val Leu Ala Leu Ala Ala Asp Gly Arg Ser Thr Arg Tyr
85 -5 1 5
86
87 TGG GAC TGC TGC AAG CCT TCG TGC GGC TGG GCC AAG AAG GCT CCC GTG 144
88 Trp Asp Cys Cys Lys Pro Ser Cys Gly Trp Ala Lys Lys Ala Pro Val
89 10 15 20
90
91 AAC CAG CCT GTC TTT TCC TGC AAC GCC AAC TTC CAG CGT ATC ACG GAC 192
92 Asn Gln Pro Val Phe Ser Cys Asn Ala Asn Phe Gln Arg Ile Thr Asp
93 25 30 35 40
94
95 TTC GAC GCC AAG TCC GGC TGC GAG CCG GGC GGT GTC GCC TAC TCG TGC 240
96 Phe Asp Ala Lys Ser Gly Cys Glu Pro Gly Gly Val Ala Tyr Ser Cys
97 45 50 55
98
99 GCC GAC CAG ACC CCA TGG GCT GTG AAC GAC GAC TTC GCG CTC GGT TTT 288

RAW SEQUENCE LISTING PATENT APPLICATION US/09/189,028

DATE: 08/25/1999
TIME: 16:39:32

INPUT SET: S33065.raw

100	Ala	Asp	Gln	Thr	Pro	Trp	Ala	Val	Asn	Asp	Asp	Phe	Ala	Leu	Gly	Phe	
101				60					65					70			
102																	
103	GCT	GCC	ACC	TCT	ATT	GCC	GGC	AGC	AAT	GAG	GCG	GGC	TGG	TGC	TGC	GCC	336
104	Ala	Ala	Thr	Ser	Ile	Ala	Gly	Ser	Asn	Glu	Ala	Gly	Trp	Cys	Cys	Ala	
105			75					80					85				
106																	
107	TGC	TAC	GAG	CTC	ACC	TTC	ACA	TCC	GGT	CCT	GTT	GCT	GGC	AAG	AAG	ATG	384
108	Cys	Tyr	Glu	Leu	Thr	Phe	Thr	Ser	Gly	Pro	Val	Ala	Gly	Lys	Lys	Met	
109			90					95				100					
110																	
111	GTC	GTC	CAG	TCC	ACC	AGC	ACT	GGC	GGT	GAT	CTT	GGC	AGC	AAC	CAC	TTC	432
112	Val	Val	Gln	Ser	Thr	Ser	Thr	Gly	Gly	Asp	Leu	Gly	Ser	Asn	His	Phe	
113	105						110				115					120	
114																	
115	GAT	CTC	AAC	ATC	CCC	GGC	GGC	GGC	GTC	GGC	ATC	TTC	GAC	GGA	TGC	ACT	480
116	Asp	Leu	Asn	Ile	Pro	Gly	Gly	Gly	Val	Gly	Ile	Phe	Asp	Gly	Cys	Thr	
117					125					130					135		
118																	
119	CCC	CAG	TTC	GGC	GGT	CTG	CCC	GGC	CAG	CGC	TAC	GGC	GGC	ATC	TCG	TCC	528
120	Pro	Gln	Phe	Gly	Gly	Leu	Pro	Gly	Gln	Arg	Tyr	Gly	Gly	Ile	Ser	Ser	
121				140					145					150			
122																	
123	CGC	AAC	GAG	TGC	GAT	CGG	TTC	CCC	GAC	GCC	CTC	AAG	CCC	GGC	TGC	TAC	576
124	Arg	Asn	Glu	Cys	Asp	Arg	Phe	Pro	Asp	Ala	Leu	Lys	Pro	Gly	Cys	Tyr	
125			155					160					165				
126																	
127	TGG	CGC	TTC	GAC	TGG	TTC	AAG	AAC	GCC	GAC	AAT	CCG	AGC	TTC	AGC	TTC	624
128	Trp	Arg	Phe	Asp	Trp	Phe	Lys	Asn	Ala	Asp	Asn	Pro	Ser	Phe	Ser	Phe	
129			170				175					180					
130																	
131	CGT	CAG	GTC	CAG	TGC	CCA	GCC	GAG	CTC	GTC	GCT	CGC	ACC	GGA	TGC	CGC	672
132	Arg	Gln	Val	Gln	Cys	Pro	Ala	Glu	Leu	Val	Ala	Arg	Thr	Gly	Cys	Arg	
133	185					190					195					200	
134																	
135	CGC	AAC	GAC	GAC	GGC	AAC	TTC	CCT	GCC	GTC	CAG	ATC	CCC	TCC	AGC	AGC	720
136	Arg	Asn	Asp	Asp	Gly	Asn	Phe	Pro	Ala	Val	Gln	Ile	Pro	Ser	Ser	Ser	
137					205					210					215		
138																	
139	ACC	AGC	TCT	CCG	GTC	AAC	CAG	CCT	ACC	AGC	ACC	AGC	ACC	ACG	TCC	ACC	768
140	Thr	Ser	Ser	Pro	Val	Asn	Gln	Pro	Thr	Ser	Thr	Ser	Thr	Thr	Ser	Thr	
141				220					225					230			
142																	
143	TCC	ACC	ACC	TCG	AGC	CCG	CCA	GTC	CAG	CCT	ACG	ACT	CCC	AGC	GGC	TGC	816
144	Ser	Thr	Thr	Ser	Ser	Pro	Pro	Val	Gln	Pro	Thr	Thr	Pro	Ser	Gly	Cys	
145			235					240					245				
146																	
147	ACT	GCT	GAG	AGG	TGG	GCT	CAG	TGC	GGC	GGC	AAT	GGC	TGG	AGC	GGC	TGC	864
148	Thr	Ala	Glu	Arg	Trp	Ala	Gln	Cys	Gly	Gly	Asn	Gly	Trp	Ser	Gly	Cys	
149			250				255					260					
150																	
151	ACC	ACC	TGC	GTC	GCT	GGC	AGC	ACT	TGC	ACG	AAG	ATT	AAT	GAC	TGG	TAC	912
152	Thr	Thr	Cys	Val	Ala	Gly	Ser	Thr	Cys	Thr	Lys	Ile	Asn	Asp	Trp	Tyr	

RAW SEQUENCE LISTING PATENT APPLICATION US/09/189,028

DATE: 08/25/1999
TIME: 16:39:32

INPUT SET: S33065.raw

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153      265      270      275      280
154
155 CAT CAG TGC CTG TAGACGCAGG GCAGCTTGAG GGCCTTACTG GTGGCCGCAA      964
156 His Gln Cys Leu
157
158
159 CGAAATGACA CTCCCAATCA CTGTATTAGT TCTTGACAT AATTTCGTCA TCCCTCCAGG      1024
160
161 GATTGTCACA TAAATGCAAT GAGGAACAAT GAGTAC      1060
162
163
164 (2) INFORMATION FOR SEQ ID NO:2:
165
166 (i) SEQUENCE CHARACTERISTICS:
167 (A) LENGTH: 305 amino acids
168 (B) TYPE: amino acid
169 (D) TOPOLOGY: linear
170
171 (ii) MOLECULE TYPE: protein
172
173 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
174
175 Met Arg Ser Ser Pro Leu Leu Pro Ser Ala Val Val Ala Ala Leu Pro
176 -21 -20      -15      -10
177
178 Val Leu Ala Leu Ala Ala Asp Gly Arg Ser Thr Arg Tyr Trp Asp Cys
179 -5      1      5      10
180
181 Cys Lys Pro Ser Cys Gly Trp Ala Lys Lys Ala Pro Val Asn Gln Pro
182      15      20      25
183
184 Val Phe Ser Cys Asn Ala Asn Phe Gln Arg Ile Thr Asp Phe Asp Ala
185      30      35      40
186
187 Lys Ser Gly Cys Glu Pro Gly Gly Val Ala Tyr Ser Cys Ala Asp Gln
188      45      50      55
189
190 Thr Pro Trp Ala Val Asn Asp Asp Phe Ala Leu Gly Phe Ala Ala Thr
191      60      65      70      75
192
193 Ser Ile Ala Gly Ser Asn Glu Ala Gly Trp Cys Cys Ala Cys Tyr Glu
194      80      85      90
195
196 Leu Thr Phe Thr Ser Gly Pro Val Ala Gly Lys Lys Met Val Val Gln
197      95      100      105
198
199 Ser Thr Ser Thr Gly Gly Asp Leu Gly Ser Asn His Phe Asp Leu Asn
200      110      115      120
201
202 Ile Pro Gly Gly Gly Val Gly Ile Phe Asp Gly Cys Thr Pro Gln Phe
203      125      130      135
204
205 Gly Gly Leu Pro Gly Gln Arg Tyr Gly Gly Ile Ser Ser Arg Asn Glu

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PATENT APPLICATION US/09/189,028DATE: 08/25/1999
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	140		145		150		155
206							
207							
208	Cys	Asp	Arg	Phe	Pro	Asp	Ala
209					Leu	Lys	Pro
210							Gly
211	Asp	Trp	Phe	Lys	Asn	Ala	Asp
212							Asn
213							Pro
214	Gln	Cys	Pro	Ala	Glu	Leu	Val
215							Ala
216							Arg
217	Asp	Gly	Asn	Phe	Pro	Ala	Val
218							Gln
219							Ile
220	Pro	Val	Asn	Gln	Pro	Thr	Ser
221							Thr
222							Ser
223	Ser	Ser	Pro	Pro	Val	Gln	Pro
224							Thr
225							Thr
226	Arg	Trp	Ala	Gln	Cys	Gly	Gly
227							Asn
228							Gly
229	Val	Ala	Gly	Ser	Thr	Cys	Thr
230							Lys
231							Ile
232	Leu						Asn
233							Asp
234							Trp
235							Tyr
236							His
237							Gln
238							Cys
239							
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(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 1473 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Fusarium oxysporum

(B) STRAIN: DSM 2672

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: 97..1224

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

PAGE: 1

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/09/189,028

DATE: 08/25/1999
TIME: 16:39:33

INPUT SET: S33065.raw

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Error

Original Text